CLAIMS

1. A fencing node for a safety fencing system defining a fencing area, including; a distance measurement device for measuring distances between at least two other adjacent said fencing nodes to thereby determine the fencing area, an object detection device for detecting one or more objects located within and/or around the fencing area, and a microprocessor system for processing data from the distance measurement devices and the object detection devices of a plurality of said fencing nodes, the microprocessor system determining a shape and dimensions of the fencing area based on the data received from the distance measurement devices, and a relative location of the or each detected object within and/or around the fencing area on data received from the object detection devices, wherein the object detection device is an object detection transceiver for sending radio signals through the fencing area, and for measuring radio signals reflected from the or each detected object to thereby determine a distance and angular position of the or each said detected object relative to the fencing node.

2. A fencing node according to claim 1, wherein the microprocessor system differentiates the or each detected object as a human or as an inanimate object based on movement of the object.

3. A fencing node according to claim 2, further including a radio communication transceiver, wherein the microprocessor system issues an alert signal through the radio transmission transceiver under specific conditions based on information provided by said data.

4. A fencing node according to claim 3, wherein the specific conditions is the movement of a detected said human out of the fencing area.

5. A fencing node according to claim 3, wherein the specific conditions is the movement of a detected said human into the fencing area.

6. A fencing node according to any one of claims 3 to 5, wherein the alert signal is provided by an alert sounder device.

7. A fencing node according to any one of claims 3 to 6, wherein the alert signal is provided by an SMS/message sender.

8. A fencing node according to any one of claims 3 to 7, wherein the radio communication transceiver is adapted to identify humans carrying identification devices that indicate their authorization to be within the fencing area.

9. A fencing node according to claim 8, wherein the identification device is a smart phone or watch, long range radio,GNSS device or RFID tag.

10. A fencing node according to any one of claims 3 to 9, wherein the radio communication transceiver is adapted to send the alert signal to radio communication transceivers supported on objects located within and/or around the fencing area.

11. A fencing node according to any one of the claims 3 to 10, wherein the radio communication transceiver is adapted to send a control signal for controlling an operation of machinery detected as said object within and/or around the fencing area.

12. A fencing node according to claim 11, wherein the control signal slows or stops the operation of the machinery.

13. A fencing node according to any one of the preceding claims, wherein the distance measurement device is a distance measurement transceiver for sending radio signals to adjacent said fencing nodes to thereby ascertain the distances therebetween.

14. A safety fencing system for defining a fencing area and for detecting one or more objects located within and/or around the fencing area, including at least three fencing nodes according to any one of the preceding claims locatable in a spaced apart relationship around a periphery of the fencing area.

15. A method of using a safety fencing system according to claim 14; the method including locating the fencing nodes in a spaced apart relationship around a periphery of the fencing area, activating the distance measurement device of each said fencing node to send a radio signal to adjacent said fencing nodes for ascertaining a distance between the fencing nodes to thereby determine a shape and dimensions of the fencing area, and activating the object detection device of each fencing node to send radio signals through the fencing area, to measure radio signals reflected from the or each detected object to thereby determine a distance and angular position of the or each said detected object relative to the fencing node.